

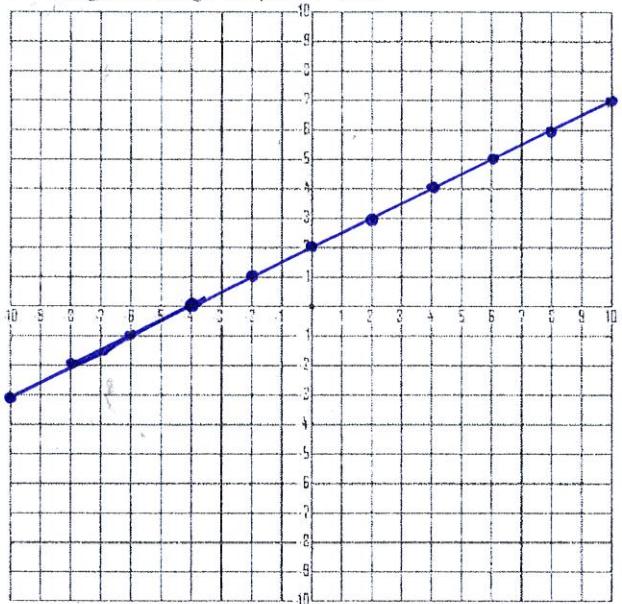
Equation of a line from a Point and Slope

Steps:

1. Analyze the problem.
2. Plot the given point.
3. Use slope triangles to find the y-intercept.
4. Write the equation.

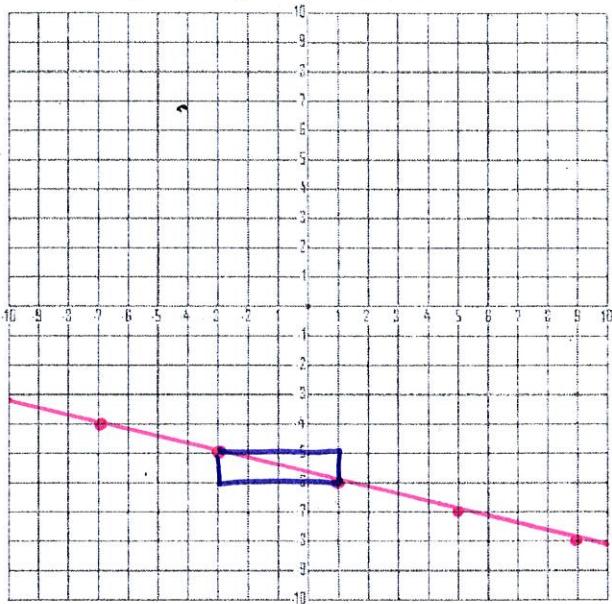
Examples:

Find the equation of the line with a slope of $\frac{1}{2}$ that goes through the point $(-4, 0)$.



y-intercept: 2 Equation: $y = \frac{1}{2}x + 2$

Find the equation of the line with a slope of $-\frac{1}{4}$ that goes through the point $(-3, -5)$.



y-intercept: $-5\frac{3}{4}$ Equation: $y = -\frac{1}{4}x - 5\frac{3}{4}$